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# ***Math***

# ***Prim six***

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**Mrs: Nagat Mahmoud**

**I ♥ math**

## *Unit 1 : Division , Factors , Multiples*

### *Lesson 1 : Using Long Division in the real world*

#### **1** Divide using the standard division algorithm

1)  $785 \div 5 = \dots\dots\dots$

2)  $259 \div 4 = \dots\dots\dots$

3)  $9628 \div 8 = \dots\dots\dots$

4)  $1995 \div 7 = \dots\dots\dots$

**② Dividing by a two – Digit number using the standard Division algorithm**

1)  $1\,449 \div 63 = \dots\dots\dots$

2)  $44\,048 \div 42 = \dots\dots\dots$

3)  $9\,982 \div 46 = \dots\dots\dots$

4)  $9\,052 \div 62 = \dots\dots\dots$



**3) Using division in the world around us :**

**Which situation involve division ? identify all that apply**

- 1) Sara likes to take photos with her new camera , she took 420 photos in 15 days. How Many photos did she take in each day ?

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- 2) A primary school is planning to a trip to the museum, there are 495 students . if each bus has 45 seats , how many buses will be needed to fill all the students?

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- 3) A Zookeeper wants to give each monkey at the zoo an equal number of bananas . there 37 monkeys in the zoo and 555 bananas how many bananas does each monkey get? And how many are left over for him?

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- 4) Ahmed has 1375 oranges and need pack them up equally in 25 boxes.  
How many oranges in each box?

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- 5) The food bank's top donor donated 1250 tokens at each of 10 different fundraisers . what is the total donation for all fundraisers?

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- 6) The food bank can make one food box that can feed one person, 3 meals per day for two weeks. How many total meals can one food make?

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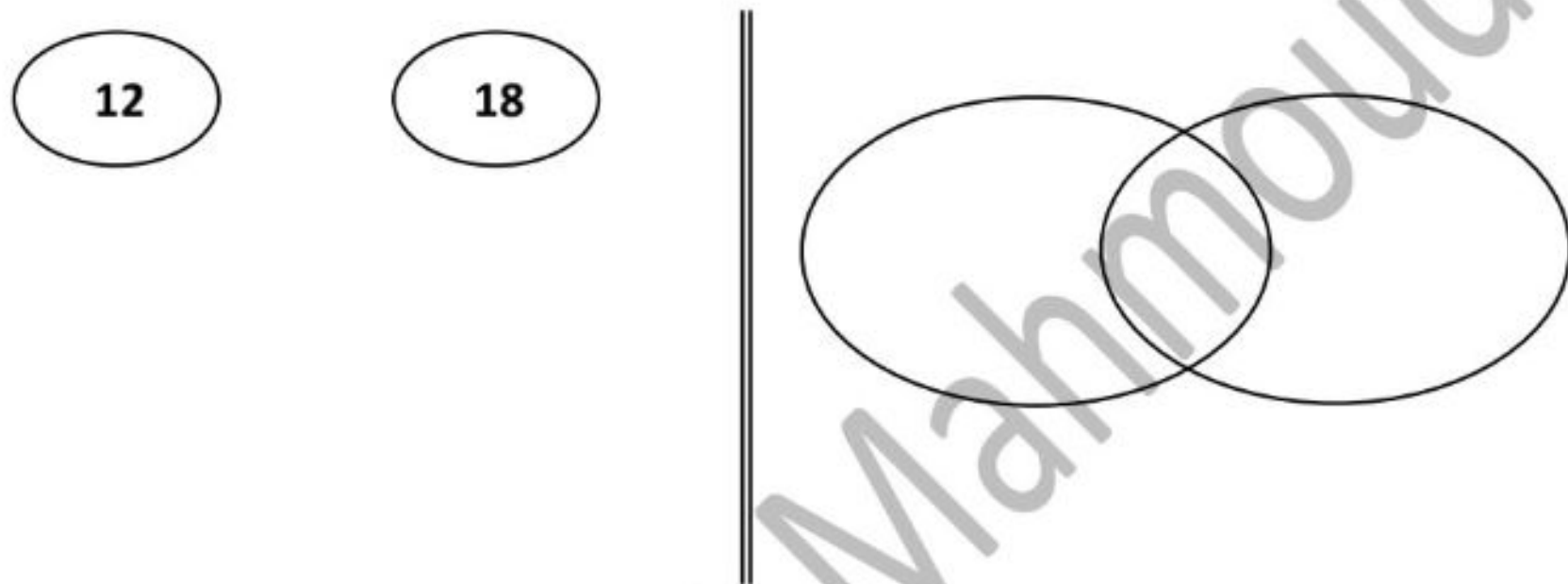
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## Lesson 2 : Factorize the into its prime factors

Use Venn diagram to find ( G.C.F) and (L.C.M)

- 1) Find (G.C.F) and (L.C.M) of the numbers 12 , 18 by using Venn diagram :



From Venn diagram:

G.C.F =

L.C.M =

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- 2) Find (G.C.F) and (L.C.M) of the numbers 4 , 9 by using Venn diagram :

From Venn diagram:

G.C.F = .....

L.C.M = .....



Use Venn diagram to find (G.C.F) and (L.C.M) of each of the following

**18 and 24**

**20 and 30**

**36 and 42**

**5 and 7**

**16 and 20**

**24 and 36**

**16 and 24**

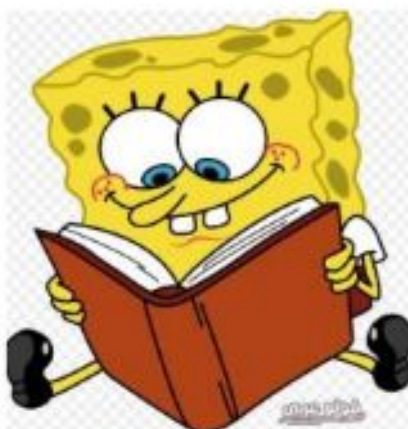
**12 and 15**



# H.W

## ① Choose the correct answer:

- 1) If  $384 \div 16 = 24$  then the dividend is .....  
a) 384                      b) 16                      c) 24                      d) 0
- 2) If  $40 \div 5 = 8$  , then the remainder is .....  
a) 40                      b) 5                      c) 8                      d) 0
- 3) If  $29 \div 3 = 9 \text{ R } 2$  , then the divisor is .....  
a) 29                      b) 3                      c) 9                      d) 2
- 4) If Mona has 17 oranges and she wants to distribute them equally among 3 of her friends , how many oranges are left ?  
a) 17                      b) 3                      c) 5                      d) 2
- 5) Salma made 47 cookies which she will distribute equally in tiny glass jars. if each jar is to contain 6 cookies each. how many cookies will not be placed in a jar?  
a) 47                      b) 5                      c) 6                      d) 7



6) Noha baked cookies for her classmates. If she can place 12 cookies on a tray. How many trays will she need to prepare 276 cookies?

- a) 12                      b) 21                      c) 22                      d) 23

7) Ahmed has 120 crayons distribute them among 6 of his friends , how many crayons are left?

- a) 0                      b) 1                      c) 2                      d) 3

8) The common factor of all numbers is .....

- a) 0                      b) 1                      c) 2                      d) 3

9) The G.C.F of any two prime numbers is .....

- a) 0                      b) 1                      c) 2                      d) 3

10) The common multiple of all factors is .....

- a) 0                      b) 1                      c) 2                      d) 3

11) The greatest common factor of 6 and 8 is .....

- a) 1                      b) 2                      c) 3                      d) 4

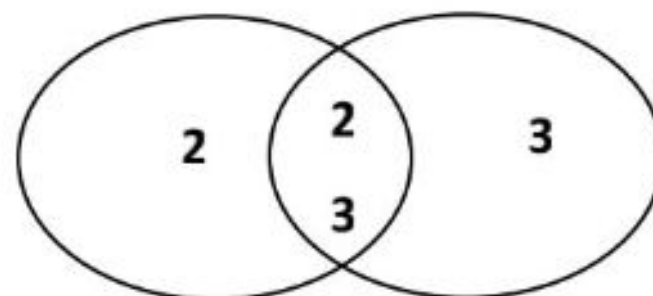
12) The greatest common factor of 2 and 3 is .....

- a) 1                      b) 2                      c) 3                      d) 6

13) From the following diagram: The G.C.F of the representing numbers is

.....

- a) 4                      b) 9  
c) 6                      d) 36





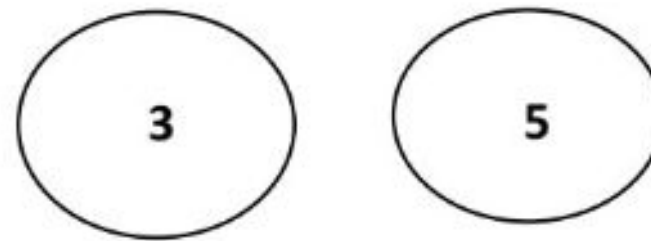
14) From the following Venn diagram: The L.C.M of the representing numbers is .....

a) 1

b) 3

c) 5

d) 15



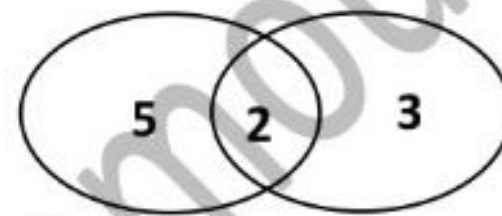
15) From the following Venn diagram represent the prime factorization of two numbers which are .....

a) 3 and 5

b) 2 and 3

c) 2 and 5

d) 6 and 10



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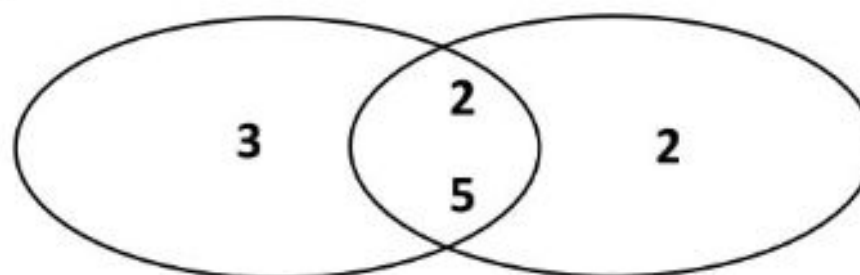
**2** Complete each of the following

1) The prime has only ..... factors

2) The L.C.M of the two prime numbers is .....

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**3** Using the following Venn diagram, Complete :

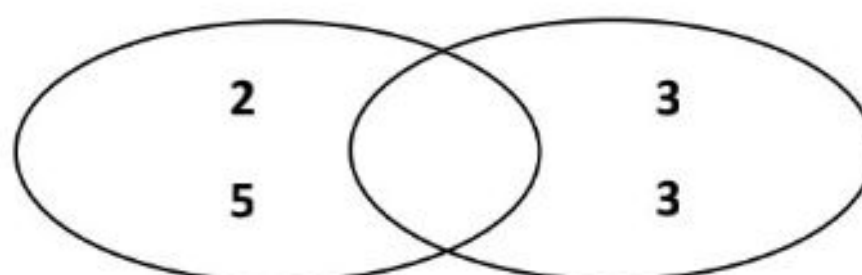


a) The two numbers represented in the Venn diagram are ..... , .....

b) The common prime factors of the two numbers are ..... , .....

c) The G.C.F for the two numbers is .....

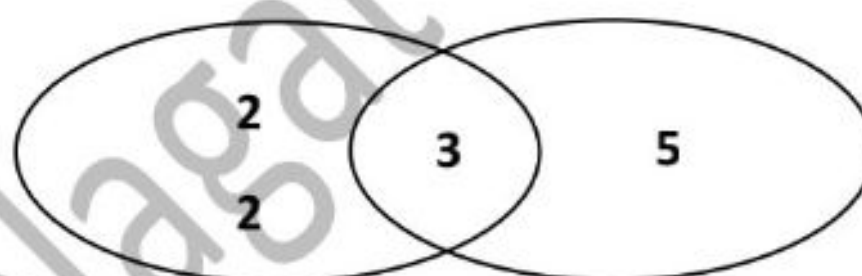
**4** Using the following Venn diagram, Complete :



- a) The two numbers represented in the Venn diagram are ..... , .....
- b) The common prime factors of the two numbers are ..... , .....
- c) The G.C.F for the two numbers is .....
- d) The L.C.M for the two numbers is .....

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**5** Using the following Venn diagram, Complete :



- a) The two numbers represented in the Venn diagram are ..... , .....
- b) The common prime factors of the two numbers are ..... , .....
- c) The G.C.F for the two numbers is .....
- d) The L.C.M for the two numbers is .....

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2



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### *Lesson 3 : Writing Expressions using the G.C.F*

- ①** Nada has 12 red flowers and 20 yellow flowers. She wants to make bouquets with the same number of each color flower in each color flower in each bouquet.

- 1) What is the greatest number of she can make?
- 2) Write the expression that represent this situation

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- ②** Sara wanted to make a number of cartons to donated to charitable organizations: if she had 8 boxes of cheese and 12 bags of legumes.  
What is the largest number of cartons that can be made so that all cartons include the same number of items

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- 3** Samy has 6 oranges and 10 bananas. What is the largest number of bags that can be made so that all bags include the same number of items.

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- 4** The students collected 20 boxes of cheese and 40 bags of legumes what is the largest number of baskets of food that can be prepared without any food left?

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## H.W

- ⑤ Amira has 24 of red marbles and 36 of green marbles. What is the largest number of bags that can be made so that all bags include the same number of marbles?

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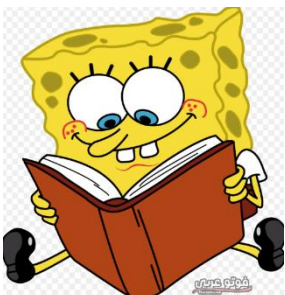
- ⑥ Karim 48 pencils and 18 crayons. What is the numerical expression of the greatest number of sets that can be made so that all sets include the same number of items?

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**7 Choose the correct answer:**

- 1) The following expression represents the greatest number of bags can be made from apples and bananas respectively :  $(12 \times 6)$   $(12 \times 4)$  , then the number of all bags is  
a) 12                      b) 4                      c) 6                      d) 120
- 2) The following expression represents the greatest number of trays can be made from cookies and croissant respectively:  $(3 \times 4)$   $(3 \times 7)$  , then the number of cookies in each tray is :  
a) 3                      b) 4                      c) 7                      d) 12
- 3) The following expression represents the greatest number of bags can be made from potatoes and carrot respectively :  $(6 \times 6)$   $(6 \times 3)$  , then the total number of carrots in all bags is :  
a) 6                      b) 36                      c) 18                      d) 9
- 4) The following expression represents the greatest number of bags can be made from red and green marbles respectively:  $(5 \times 2)$   $(5 \times 4)$  , then the total number of marbles all bags is :  
a) 10                      b) 20                      c) 30                      d) 40
- 5) The following expression represents the greatest number of baskets water and juice bottles respectively:  $(10 \times 3)$   $(10 \times 5)$  , then the number of all bottles in each baskets is :  
a) 10                      b) 8                      c) 15                      d) 80



## Lesson 4 : Factorize the least common multiple

### ① Find the result

1) $\frac{3}{5} + \frac{1}{5} = \dots\dots\dots$	2) $\frac{2}{7} + \frac{6}{7} = \dots\dots\dots$
3) $5\frac{1}{4} + \frac{2}{4} = \dots\dots\dots$	4) $\frac{2}{3} + \frac{2}{3} = \dots\dots\dots$
5) $\frac{7}{8} - \frac{3}{8} = \dots\dots\dots$	6) $3\frac{5}{6} - 1\frac{1}{6} = \dots\dots\dots$
7) $3 - \frac{3}{4} = \dots\dots\dots$	8) $5\frac{3}{7} - \frac{6}{7} = \dots\dots\dots$
9) $\frac{1}{5} + \frac{1}{8} = \dots\dots\dots$	10) $\frac{3}{7} + \frac{2}{5} = \dots\dots\dots$
11) $\frac{1}{4} + \frac{1}{12} = \dots\dots\dots$	12) $1\frac{1}{5} + \frac{3}{5} = \dots\dots\dots$
13) $\frac{5}{6} - \frac{7}{12} = \dots\dots\dots$	14) $3\frac{2}{3} - 1\frac{2}{5} = \dots\dots\dots$

# H.W

## ① Find the result

1) $\frac{1}{4} + \frac{2}{4} = \dots\dots\dots$	2) $\frac{1}{6} + \frac{5}{6} = \dots\dots\dots$
3) $2\frac{3}{8} + 1\frac{7}{8} = \dots\dots\dots$	4) $\frac{3}{11} + \frac{7}{11} = \dots\dots\dots$
5) $\frac{3}{5} - \frac{1}{5} = \dots\dots\dots$	6) $4\frac{2}{5} - 1\frac{4}{5} = \dots\dots\dots$
7) $5 - 1\frac{2}{7} = \dots\dots\dots$	8) $1 - \frac{3}{8} = \dots\dots\dots$
9) $\frac{1}{4} + \frac{2}{3} = \dots\dots\dots$	10) $2\frac{1}{3} + 1\frac{1}{2} = \dots\dots\dots$
11) $\frac{7}{10} + \frac{5}{6} = \dots\dots\dots$	12) $3\frac{2}{8} + 2\frac{1}{6} = \dots\dots\dots$
13) $\frac{5}{6} - \frac{3}{8} = \dots\dots\dots$	14) $1\frac{1}{12} - \frac{5}{9} = \dots\dots\dots$

**② Choose the correct answer**

1)  $\frac{5}{6} - \frac{3}{5} = \dots\dots\dots$

a)  $\frac{7}{30}$

b)  $\frac{8}{30}$

c)  $\frac{9}{30}$

d)  $\frac{1}{3}$

2) The equivalent fraction of  $\frac{12}{15}$  is  $\dots\dots\dots$

a)  $\frac{2}{5}$

b)  $\frac{3}{4}$

c)  $\frac{4}{5}$

d)  $\frac{1}{3}$

3)  $2\frac{3}{4} + 1\frac{2}{3} = \dots\dots\dots$

a)  $3\frac{5}{12}$

b)  $4\frac{5}{12}$

c)  $\frac{17}{12}$

d) 4

4)  $\frac{5}{8} + \frac{\dots}{\dots} = \dots\dots\dots$

a)  $\frac{1}{8}$

b)  $\frac{3}{8}$

c)  $\frac{5}{8}$

d)  $\frac{7}{8}$

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- ③** Salma bought  $3\frac{1}{2}$  kg of tomato, and  $1\frac{1}{4}$  kg of onion. how much vegetables did she buy?

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## Unit 2 : Rational numbers

*Lesson 1 : Using a Number line to describe data*

*Lesson 2 : using a number line and symbols to compare numbers*

**1** which is an integer ?

a)  $-0.5$

b)  $-5$

c)  $5.5$

d)  $4\frac{4}{5}$

e)  $\frac{7}{7}$

f)  $\frac{12}{3}$

\*\*\*\*\*

**2** Write an integer to represent each of the following situations:

a) A profit of 25 L.E

b) A loss of 3 L.E

c) 10 degree below 0

d) An increase of 75 L.E

e) 6 m above sea level

f) 19 m below ground

g) A building is 12m high

h) 4 steps backward

i) A bank deposit of 100 L.E

j) A gain of 5 Kilograms

k) A profit of 200 L.E

l) The house is 10 m high

**3 Write the opposite of each integers**

a)  $-7$

b)  $1000$

c)  $0$

d)  $-5$

e)  $6$

f)  $-16$

g)  $-8$

h)  $3$

i)  $-14$

j)  $62$

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**4 Represent each of the following on number line.**

a)  $10, -2, -3, 5, 3$



b)  $-4, -3, -2, -1, 0, 1$

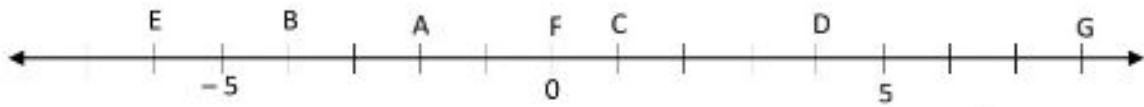


c)  $-2, -1, 0, 1, 2$





- 5 Use the number line. write the integer for each point then give its opposite (additive inverse)



1) A.....

2) B.....

3) C.....

4) D.....

5) E.....

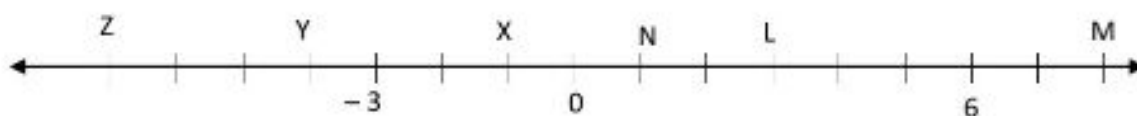
6) F.....

7) G.....

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- ⑥ Use the number line. write the integer for each point then give its opposite (additive inverse)



1) Z.....

2) Y.....

3) X.....

4) L.....

5) M.....

6) N.....

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- ⑥ Put  $<$ ,  $>$ ,  $=$

a)  $4 \quad \square \quad 3$

b)  $5 \quad \square \quad -10$

c)  $-12 \quad \square \quad -4$

d)  $0 \quad \square \quad -2$

e)  $-8 \quad \square \quad -7$

f)  $-3 \quad \square \quad -7$

g)  $6 \quad \square \quad 2$

h)  $2 \quad \square \quad -3$

i)  $0 \quad \square \quad -1$

j)  $-4 \quad \square \quad -8$

k)  $-1000 \quad \square \quad 1$

l)  $-20 \quad \square \quad -2$

**7** Arrange in Ascending order

4 , - 5 , 1 , - 3 , 0 , - 7

The Ascending order

.....

4 , - 3 , 6 , 0 , - 10

The Ascending order

.....

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**8** Arrange in Descending order

- 7 , - 9 , 0 , - 4 , 2 , 11

The Descending order

.....

8 , - 13 , - 19 , 0 , - 15

The Descending order

.....

## Quiz\_02

**1** Choose the correct answer:

1) ..... is multiple of any number

- a) 3                      b) 2                      c) 1                      d) 0

2) Which of the following are relatively prime numbers?

- a) 4 and 8                      b) 12 and 18                      c) 2 and 12                      d) 9 and 4

3) Youssef saves 105 L.E weekly. How much did he save daily?

- a) 15                      b) 98                      c) 735                      d) 112

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**2** Complete the following:

1) The L.C.M of 5 and 7 is .....

2) The common factor of all numbers is .....

3)  $6(7 + 9) = 42 + \dots$



- 3 Find G.C.F and L.C.M of 12 and 18 by 2 methods

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- 4 Ameen paid 3,936 L.E to buy boxes o chocolate find the price of each box.

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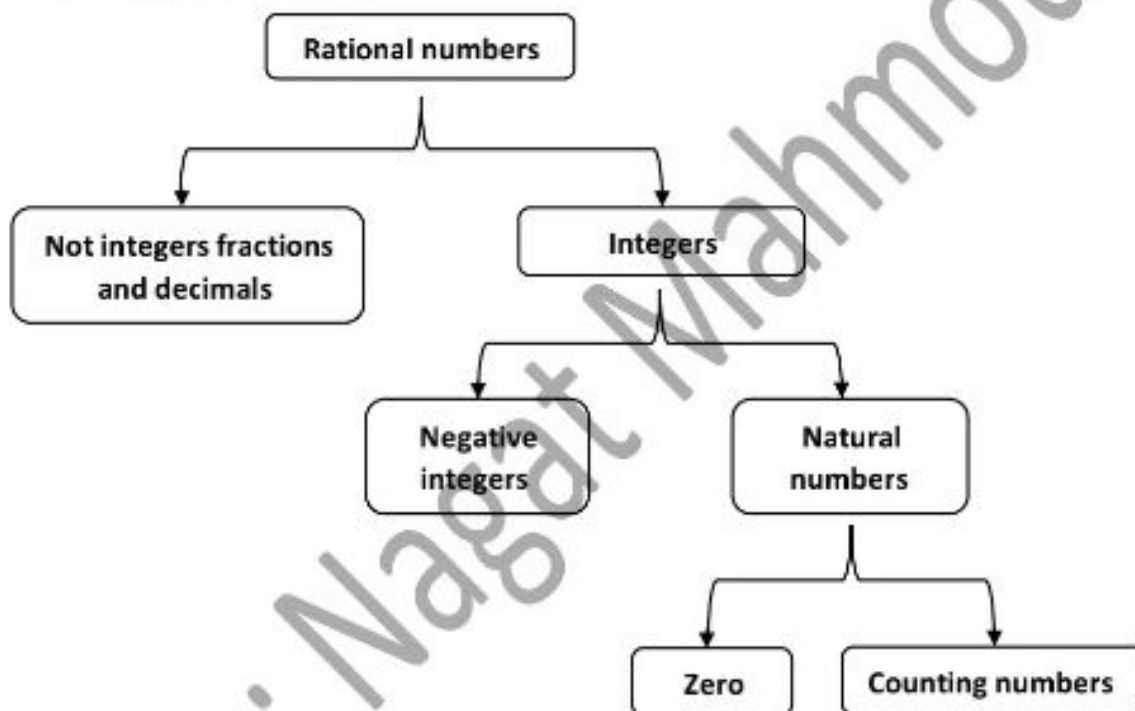
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## Unit 2 : Rational numbers

### Lesson 3 : Analyzing Rational Numbers by Using Models

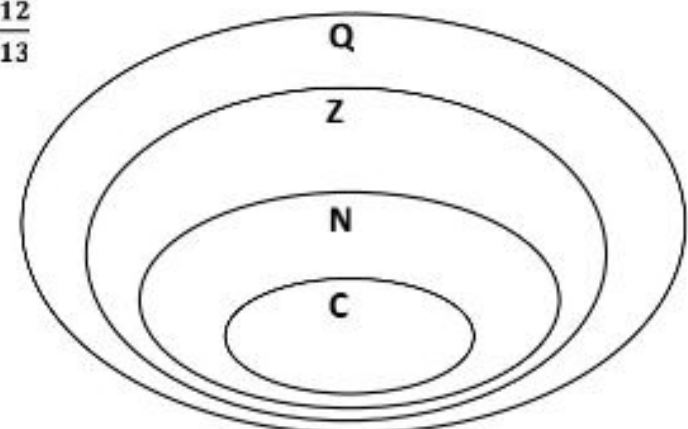
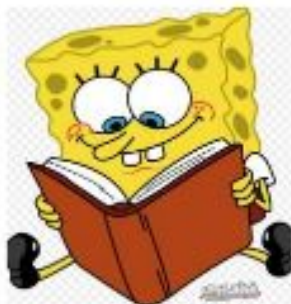
#### Understanding rational number

A rational number is any number that can be written in the form  $\frac{a}{b}$  where a and b are integers and  $b \neq 0$



1 Write the following numbers in the opposite Venn diagram

$\frac{3}{4}$  , 782 , 0 , -10 , -0.5 , -6 ,  $7\frac{12}{13}$



(1)

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2 Write the given rational numbers in fraction form  $\frac{a}{b}$  ?

a) -3

b) -0.31

c)  $3\frac{2}{5}$

d) 2.5

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3 Naming Numbers Match the numbers to the best subset.

Rational number – Integer – counting number – natural number

a) 0.58475 .....

b) -428 .....

c) -3 .....

d) 0 .....

e)  $\frac{3}{4}$  .....

f) 13,274 .....

g) -4 .....

h) 17,273 .....

i) 4.5 .....

j)  $\frac{1}{2}$  .....

k) 1 .....

l) -12.892 .....

\*\*\*\*\*

4 Write "belong" or "doesn't belong"

a)  $\frac{2}{1}$  ..... to set of rational numbers



- b)  $-\frac{3}{4}$  ..... to set of integers
- c)  $-7$  ..... to set of counting numbers
- d)  $2.5$  ..... to set of integers
- e)  $2.5$  ..... to set of counting numbers
- f)  $26524$  ..... to set of rational numbers
- g)  $\frac{2}{7}$  ..... to set of rational numbers
- h)  $-23$  ..... to set of integers
- i)  $0$  ..... to set of natural numbers
- j)  $4\frac{2}{5}$  ..... to set of counting numbers

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**5** Write "a subset" or "not subset"

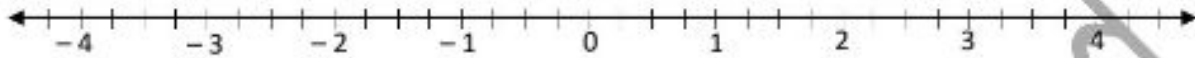
- a) Set of counting numbers is ..... of set of integers
- b) Set of rational numbers is ..... of set of natural numbers
- c) Set of counting numbers ..... of set of natural numbers
- d) Set of integers ..... of Set of counting numbers
- e) Set of integers ..... of Set of rational numbers
- f) Set of natural numbers ..... of set of integers



Representing the rational numbers on the number line

⑥ Graph each rational number on the same number line.

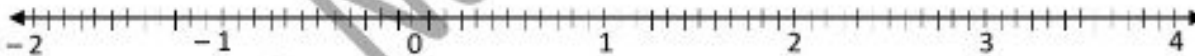
- a) 1.5                      b)  $\frac{1}{2}$                       c)  $\frac{2}{8}$                       d) -2.5



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⑦ Represent each the following rational number on the number line.

- a)  $\frac{1}{3}$                       b)  $-\frac{1}{2}$                       c)  $3\frac{1}{4}$                       d) -1.5



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⑧ Represent each the following rational number on the number line.

- a)  $-1\frac{1}{2}$                       b)  $-\frac{1}{2}$                       c)  $1\frac{1}{4}$                       d) 2.75





## Unit 2 : Rational numbers

### Lesson 4 : Comparing and ordering rational numbers

**1** Compare the two numbers using the suitable sign ( $<$ ,  $>$ ,  $=$ )

a)  $\frac{5}{12}$  .....  $\frac{7}{12}$

b)  $\frac{1}{4}$  .....  $-\frac{5}{6}$

c)  $\frac{11}{12}$  .....  $\frac{11}{15}$

d)  $\frac{6}{12}$  .....  $\frac{2}{3}$

e)  $3.2$  .....  $\frac{11}{2}$

f)  $\frac{2}{3}$  .....  $\frac{4}{5}$

g)  $3.7$  .....  $3.15$

h)  $-4$  .....  $-4.1$

i)  $2.5$  .....  $2\frac{1}{2}$

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**2** Arrange the following numbers From the least to greatest:

$-\frac{2}{3}$  ,  $\frac{3}{4}$  ,  $-\frac{7}{12}$  ,  $\frac{5}{6}$  ,  $-1$

$\frac{7}{15}$  ,  $\frac{2}{5}$  ,  $\frac{2}{3}$  ,  $\frac{4}{15}$



**③** Order the following numbers From the greatest to least:

- 1.5 , - 5.3 , 5.5 , - 1.3

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$\frac{1}{2}$  ,  $\frac{11}{12}$  ,  $\frac{3}{4}$  ,  $\frac{1}{3}$

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**④** Find the rational number lying between

a)  $\frac{1}{3}$  and  $\frac{1}{2}$

b) - 3.17 and - 1.18

c)  $\frac{1}{2}$  and  $\frac{5}{7}$

d)  $-2.1$  and  $-2$

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## Quiz



**1** Choose the correct answer:

a) The number  $-1.5$  in the form is  $\frac{a}{b}$

a)  $-\frac{1}{5}$

b)  $-\frac{5}{1}$

c)  $-\frac{15}{10}$

d)  $-5\frac{1}{10}$

b) The best subset for the number 4 is .....

a) Counting number

b) natural number

c) Integers

d) Rational number

c) The smallest positive integer number is .....

a) 2

b) 3

c) 1

d) 0

d) Which of the following is the greatest number?

a)  $-2.7$

b)  $-7.2$

c)  $-1.2$

d)  $-2.1$

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(7)

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